DESMOND-STEPHAN MFG. CO.

Manufacturers of

MECHANICAL ABRASIVE *and* DIAMOND GRINDING WHEEL DRESSERS

URBANA, OHIO

We Have a Product to Sell and a Service to Render

A WHEEL DRESSER is judged by two things: service and economy. A wheel dresser gives best satisfaction when it is correctly used. No one type of wheel dresser is good for every kind of work.

Being makers of all types, we are fortunately able to impartially tell you why one particular type of dresser will do one particular kind of work better than any other type. The mechanical dresser has its definite place and uses; as has the abrasive type, and the diamond. We make them all, in various designs of each type.

Feel free to ask our advice on any wheel-dressing problem. Our services cost you nothing nor do our wheel dressers cost you anything if not entirely satisfactory.

Having manufactured wheel dressers for twenty-five years in a modern plant especially equipped for this purpose, and having a corps of salesmen who are constantly in touch with the requirements of the trade, we feel our services may be of value to all users of grinding wheels.

Dressing a Wheel with a Diamo-Carbo Dresser

It is part of our service to advise with you and to the best of our ability—recommend the type that will most efficiently and economically handle your problem.

Any of our dressers (except diamonds) can be tried out in your own plant without obligation to purchase.

Which Type and Why

There Is a Reason for Each Type of Dresser We Make. Each Has Been Developed to Do a Particular Class of Work

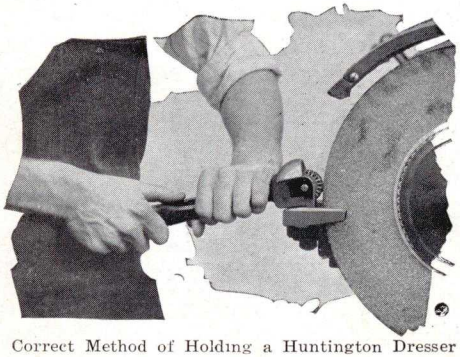
HAVE YOU ever taken a census over a certain period of time, to see how many of your grinding wheels have gone bad before they should? How many have worn down too rapidly, gone out of round, loaded up too often, wabbled out of true, or turned out poor work generally for lack of the right care at the right time?

The remedy lies, first, in the right choice of a wheel; second, in the right choice of a dresser and the right use of it. The best friend an expensive grinding wheel has is the inexpensive dresser that keeps it performing up to continuous, hundred-per-cent efficiency.

Dressing and truing grinding wheels are not one and the same operation, though very frequently the same term is used to describe them both. The object of dressing the cutting face of the wheel is that it may cut freely without generating undue heat. The wheel is, to a certain extent, trued by the action of the dresser, sufficiently for any work other than precision grinding.

By "truing" a grinding wheel, we mean giving it a perfect face and making it run perfectly true, the word perfect being obviously intended to mean the finest degree of accuracy which is commercially obtainable. A wheel is trued in order that it may produce work of like accuracy to itself.

The great difference between dressing and truing lies in the fact that in the latter operation the object is to dull the fine cutting points of the abrasive grains so as to obtain the requisite finish, while in the former operation the dresser is used to remove the bond from between the abrasive grains, also the dulled grit, leaving in its place sharp grit which will cut freely.



Correct Method of Holding a Huntington Dresser

We make four kinds of Wheel Dressers: (1) the Mechanical (revolving cutter) type; (2) the Abrasive type; (3) the Diamond type, and (4) the Precision (mechanical) type.

Our long experience in this field has perhaps better qualified us than any other maker of Wheel Dressers, to recommend the one best type for any given job.

The Mechanical (or revolving cutter type) Dresser is the one best known and most used because its application is the widest. It is made in several patterns and sizes, usually with the cutters of hardened steel. It is the type best adapted for dressing rough wheels used for grinding or snagging; the size of the wheel to be dressed and the finish required determine the size of dresser most suitable for use on it. (See pages six, seven and ten).

The Abrasive type Dressers (known as "Diamo-Carbo" and "Magazine") (pages eight and nine) can be used on rough grinding wheels up to the grade known as medium hard. They are particularly well adapted for shaping and dressing wheels for form grinding, saw gumming wheels and for general tool-room work. Their relatively much lower cost for use on work where diamond dressers have sometimes been specified, is an advantage not to be overlooked.

The Diamond Wheel Dresser (see page fourteen) is an absolute necessity in securing the best finish for precision work on automobile crankshafts, axles, camshafts, and similar high-grade mechanisms.

The Precision (Mechanical) Type Dresser (see pages twelve and thirteen) can in many instances be used on wheels usually trued with a diamond, but which do not require quite the same degree of accuracy imparted by the use of a Diamond. This tool we style our Ball Bearing Dresser.

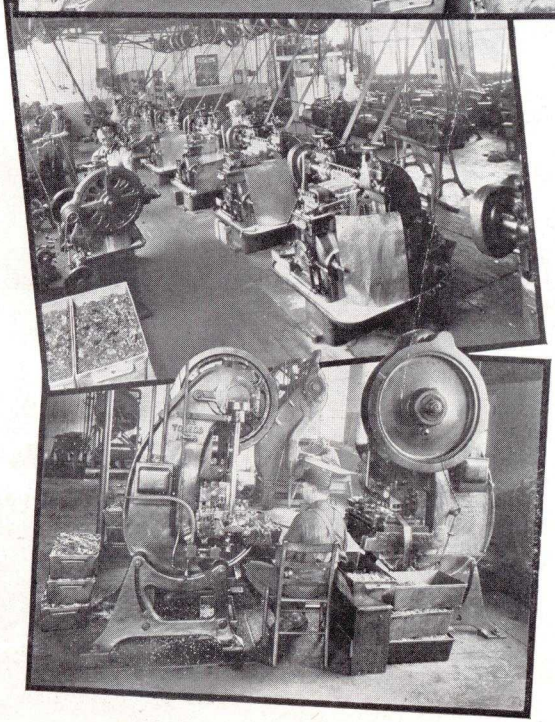
Each has its superiorities and limitations. No one type will meet every requirement; the least understood, perhaps, of all wheel dressers is the one most widely used,—the Mechanical. We will gladly detail the fine points, at your request.

The expert service we offer in advising you in the purchase and use of Wheel Dressers will pay big dividends. This service costs you nothing. A wrongly used wheel dresser does unlimited harm,—to the wheel, to the user and to ourselves.

Modern Machinery and Shop Practice

Enables us to maintain large quantity production of high quality at reasonable cost.

The above view shows part of our modern heat treating department.



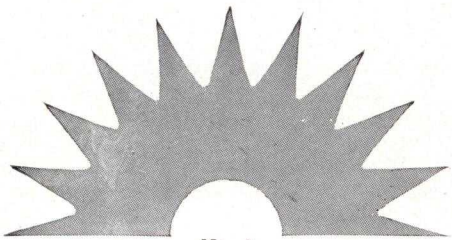
A Battery of high production Millers and Automatic Screw Machines.

A corner of our Press Room showing presses equipped with specially designed automatic dies.

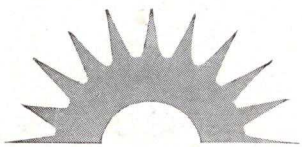
Desmond-Huntington (Patented)

No. 0 No. 1 No. 2

For Use on the Largest and Hardest Grinding Wheels Where Quick Action Is Necessary



No. 2



No. 1

No. 0

THE ideal dresser for its purpose. Experience and experiment convinced us some years ago of the need of the larger sizes which we originated. The star-shaped cutters are exactly the sizes shown. The large sizes are mounted in a superior manner, being fitted with Patent Bearings,—bushings revolving on a spindle between two washers. These extra hard mountings prolong the life of both dressers and cutters,—No. 1 lasting an average of three-and-a-half times as long as the No. 0, and the No. 2, with its six cutters to a set, thirty times as long. All are hood-protected against dust and flying particles,—a feature originated by the Desmond-Stephan Mfg. Co.

No. 0—Hooded Dresser, complete with two sets cutters .....$ .75

No. 0—Dresser Cutters (Milled) 1⅛ in. dia., per dozen sets 1.00

No. 0—Dresser Cutters (Punched) 1 3-16 in. dia., per dozen sets..$ .90

No. 0—Long Tooth Cutters 1 5-16 in. dia., per dozen sets..$1.25

No. 0—Paragon (Bushed) Cutters 1⅛ in. dia., per dozen sets....$1.25

No. 0—Stag Tooth Cutters 1 5-16 in. dia., per dozen sets.. 1.25

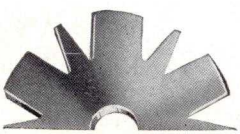
No. 0—Plain Dresser with two sets cutters 75

No. 1—Hooded Dresser complete..1.50

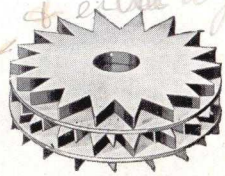
No. 1—Extra Cutters, 4 in set, 1½ in. dia., per dozen sets 2.00

No. 2—Hooded Dresser complete 2.00

No. 2—Extra Cutters, 6 in set 2⅜ in. dia., per doz. sets 6.00



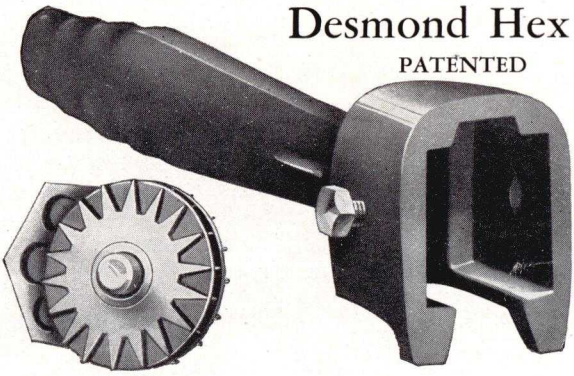
No. 0 Stag Tooth



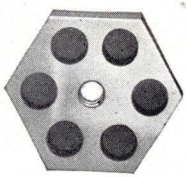
Set of No. 0 Cutters

Desmond Hex (Huntington)

PATENTED



The Most Durable Type of Mechanical Dresser Made



It takes the same size cutter as our Desmond-Huntington Dressers in the same sizes, but its superiority lies in the manner of mounting the cutter in the dresser. The hexagonal, hardened-steel nuts inserted in the jaws of the dresser have six holes, each of which, in turn, becomes a bearing for the spindle carrying the cutters.

Sizes and Prices

No. 0 Dresser with 1⅛ in. dia. Cutters $1.00

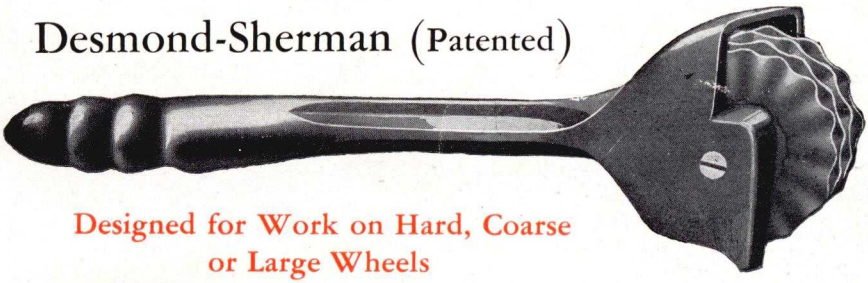
No. 1 Dresser with 1½ in. dia. Cutters $1.75

No. 2 Dresser with 2⅜ in. dia. Cutters 2.50

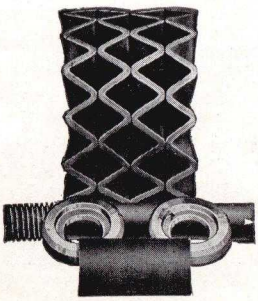
No. 5-H Dresser with 1⅝ in. dia. Cutters 2.00

For prices of Cutters see Desmond Huntington prices on page 6.

Desmond-Sherman (Patented)



Designed for Work on Hard, Coarse or Large Wheels



The corrugated cutters have a shearing action and impart a smoother finish to the wheel than the star-shaped cutters, and with less penetration. Many times longer-lived than the Huntington, this Desmond-Sherman Dresser has cutters of high grade tool steel mounted on patented long wearing bearings.

Prices

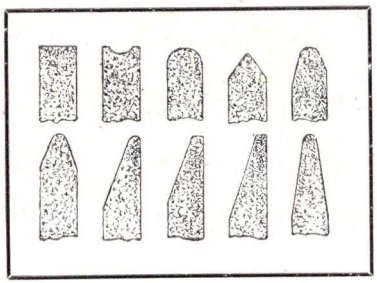
No. 1 Dresser complete, $1.50
Cutters, $2.00 per dozen sets
3 in set, 1½ in. in diameter

No. 2 Dresser complete, $2.00
Cutters, $3.50 per dozen sets
4 in set, 2⅜ in. in diameter

DIAMO-CARBO GRIND

THIS ADJUSTABLE COLLAR FORMS

PATEN

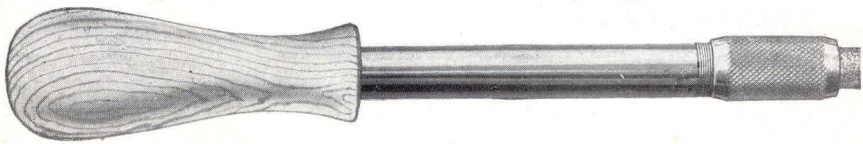


A STRONG point about the Diamo-C clusive development of this comp cost, it attains an efficiency equa Diamond. In precision work the Dian results, no wheel dresser on the mark the class of work it is designed to perf

This dresser, built to fill a real and tion entirely; it consists of a steel tu intensely hard abrasive. This tube is of an inch from the abrasive, and it wheels up to the "hard" grades.

In hand-forming special shapes, as illustrated above, wheels can be turned to the most delicate edge without fear of breaking the edge. There are many places where the common Huntington Dresser is used, where the Diamo-Carbo or Magazine should be substituted and vastly better results would be obtained. They are simple to use on all tool-room and saw gumming wheels, for rough grinding precision wheels and similar work,—needing only to be supported on a tool rest or anything else convenient. They can be gripped in both hands and rolled back and forth across the wheel face.

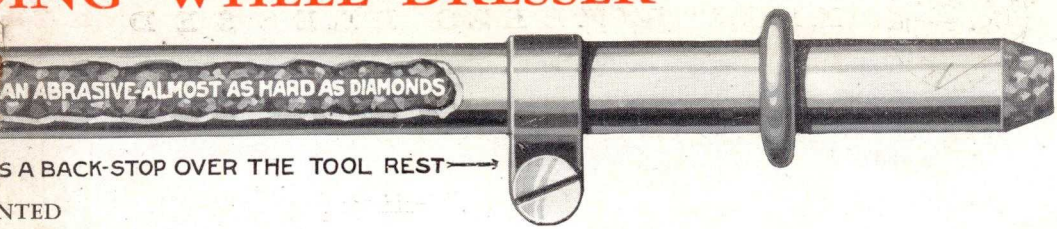
Magazine Grinding W



THIS Dresser is similar to the Diamo-Carbo except that in it the Abrasive Sticks are inserted, and held in place in the tube by a knurled chuck and advanced as they are worn away. When entirely used the Abrasive can be replaced at small cost. It is made in two sizes, $\frac{5}{8}$ in. and $\frac{7}{8}$ in. in diameter, the larger size also being made with a No. 1 Sherman or Huntington Dresser in the handle end, thus providing a permanent tool for all classes of wheels.

A WELL DRESSED WHEEL CUTS COSTS

)ING WHEEL DRESSER



NTED

Carbo Dresser (patented, and an ex-pany) is that, at a fraction of the l for some purposes to that of the mond is supreme. In economy and et is the equal of Diamo-Carbo for form.

d long-felt need, is our own produc-be (see illustration) filled with an kept ground back about an eighth can be used to dress and true all

SIZES AND PRICES

No. 3—	5/8	in. dia.,	10	in. long..	$3.50
No. 5—	5/8	in. dia.,	12	in. long..	4.00
No. 8—	3/8	in. dia.,	10	in. long..	3.50
No. 9—	3/8	in. dia.,	12	in. long..	4.00
No. 11—	1/4	in. dia.,	12	in. long..	3.50
No 12—	1/4	in. dia.,	12	in. long..	4.00
No. 00—	1 3/8	in. dia.,	12	in. long	12.00

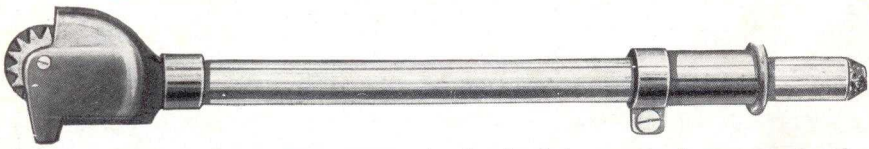
Best size for general use

For small wheels

For large coarse wheels

All of the large manufacturers of automobiles are users of the Diamo-Carbo Dressers

Combination Diamo-Carbo Dresser



If a Dresser for a very coarse hard wheel is required, we supply the Diamo-Carbo with the Sherman or Huntington in the handle end, thus giving in one tool a Dresser for all classes of wheels.

Sizes and Prices

No. 3—Combination Dresser....$4.00 No. 5 Combination Dresser....$4.50

'heel Dresser (Patented)

For Light Work

No. 1—Magazine Dresser complete, Diameter 5/8 inch.....$1.75
Extra abrasives, 6 in. long, per dozen.....$6.75

For Regular and Heavy Work

No. 2—Magazine Dresser complete, Diameter 7/8 inch.....$2.50
Extra abrasives, 6 in long, per dozen.....$9.00

No. 3—Magazine Dresser 7/8 inch Diameter.....$3.00
Combination with No. 1 Desmond-Huntington or No. 1 Sherman.

A WELL DRESSED WHEEL CUTS COSTS

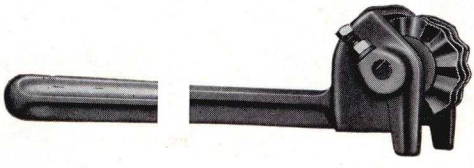
Desmond Zig Zag Dressers

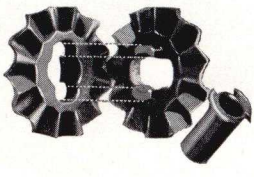
For Wheels Used for Rough Grinding

A dresser using hard iron corrugated type Cutters for dressing wheels for grinding rough castings.

No. Z-1 Dressers, complete, each	$1.50
No. Z-2 Dressers, complete, each	1.50
No. ZZ Dressers, complete, each	2.00
No. Z-1 Cutters (2 to set) 2⅜ inches diameter	$ .15 set
No. Z-2 Cutters (2 to set) 2⅞ inches diameter	.15 set
No. ZZ Cutters (4 to set) 2⅜ inches diameter	.30 set

Perfected Z Z Dressers and Cutters (Patented)





The Dresser consists of a well designed handle containing a set of 3 Patented inter-locking cutters 2½ inch diameter of manganese composition.

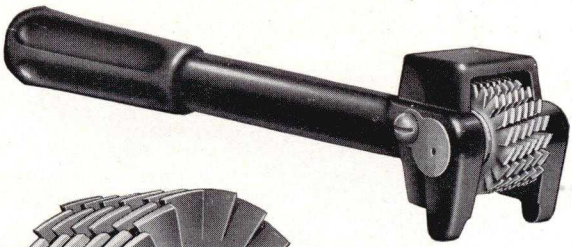
This Dresser is especially well adapted for use on large or rough wheels.

Dresser complete ---------- $2.50 Extra Cutters, per set ------- $ .60

Discount in quantities.

Desmond Zig Zag and Perfected Cutters are designed especially for use on the largest and coarsest type of wheels. They are made from a specially hard and tough iron and are mounted in a heavy rugged holder with our protection hood. These tools are extensively used by foundries and drop forging plants.

Desmond-Rearwin Dresser



Patented

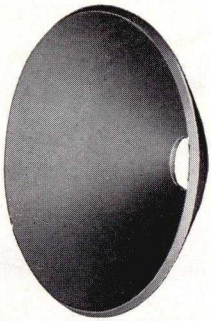
Consists of a well-shaped iron holder and patented spiral cutters which lap each other in use. They are made of a high grade of steel, twisted and tempered. The teeth of this cutter hold their shape until entirely worn out. They are self sharpening and leave the wheel with a straight smooth face. They last much longer than the ordinary Huntington or other sharp tooth cutters.

Made in two sizes, No. 1 and No. 2, using Cutters $1\frac{5}{16}$ inches in diameter, with ¼ inch hole.

Prices

No. 1 Dresser complete, each	$1.00
No. 1 Cutters—3 to set $1\frac{5}{16}$ in. dia., per dozen sets	1.20
No. 2 Dresser complete, each	1.50
No. 2 Cutters—6 to set $1\frac{5}{16}$ in. dia., per dozen sets	2.40

Conical Cutters



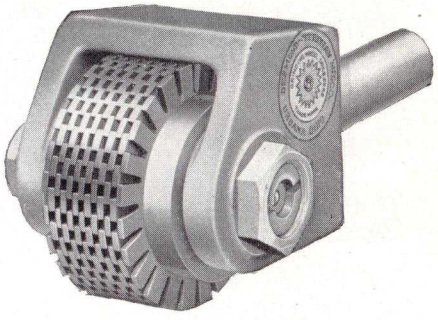
These Cutters are principally used by the manufacturers of grinding wheels for shaping and finishing their wheels for the trade. They are also used for removing heavy thicknesses of abrasive material in other industries. They are made in various diameters and angles.

Special Dressers and Cutters

We often design special Dressers and Cutters for various purposes, such as brick cleaners, highway surfacers, monumental work, clay products, various types of scrapers, cleaners and scalers. Also special dressing tools for various grinders and sharpeners. We are always very glad to consult with our customers regarding any problems they may have, and frequently are able to make suggestions that are of great value to them.

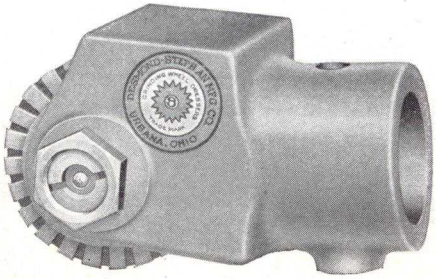
Desmond Ball Bearing Dressers

Precision Mechanical Type



Regular Straight Shank Dresser

THE Ball Bearing Dresser is intended to replace Diamonds in certain places, and is the most satisfactory substitute that has yet been produced. It is constructed to withstand long and hard usage. All working parts are hardened and ground to size and the bearings are perfectly protected against dust. The Cutters are made of a special steel, which has been found to give the best results, and they can be easily and cheaply replaced when worn. This Dresser can be used in a tool post or on a magnetic chuck, or can be furnished with special attachments for attaching to carriage or bed of certain grinding machines. They are made with shanks straight back of the head, or with shanks at right angles to the cutters from either side of the head. Shanks can be furnished in any diameter or length desired.

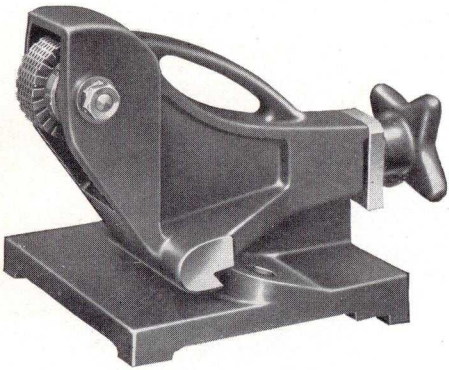


For Cincinnati Centerless Grinder

Prices

Regular Dresser with shank either straight, right hand or left hand	$15.00
Special for Cincinnati Centerless Grinder	15.00
Special attachment for Landis or Norton Type Grinders	40.00

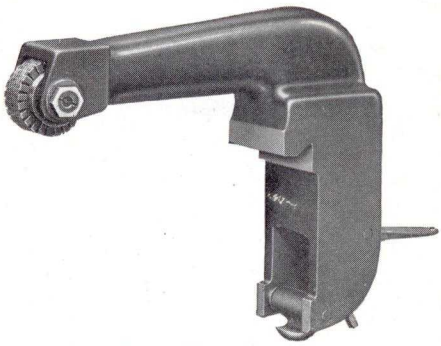
Desmond Ball Bearing Dressers (Continued)



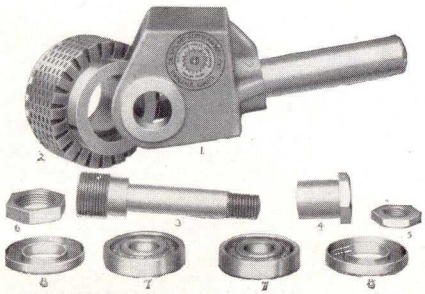
Landis Type Attachment

THE Cutters for the Ball Bearing Dresser are furnished in two different kinds, one for leaving a rough finish and one for leaving a fine smooth finish. Customers should always state which Cutter they prefer, otherwise the smooth finish Cutter will be furnished. We can also furnish the Cutter in the form of a small abrasive wheel if preferred.

We are large importers of Diamonds and know that in many instances they are absolutely indispensable, but there are many places where the highest possible precision is not required, where these tools can be used with entire satisfaction and great economy.



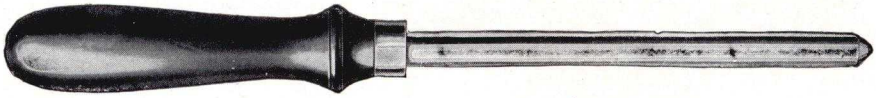
Norton Type Attachment



Repair Parts

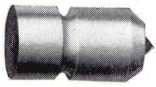
No. 1 Handle	$5.00
No. 2 Cutter Assembly	3.00
No. 3 Spindle	1.50
No. 4 End Bushing (Washers)	1.50
No. 5 Adjusting Nut	.15
No. 6 Check Nuts	.40
No. 7 Bearings, per pair	2.50
No. 8 Oil Rings, per pair	.40

Desmond Diamond Dressers



HAND TOOL

FOR LANDIS GRINDER



FOR NORTON GRINDERS

Nothing Else Can Compare with These Tools for Imparting an Accurate Surface to Precision Work

FOR Precision Grinders there is one ideal material; the Diamond, the hardest of known substances. It is that quality which gives the diamond such an important role in modern industrial activities. In wheel-dressing the best grade of stones is the most economical in the long run. Accurate truing, which is essential to precision grinding, can be done only with a diamond.

Desmond Diamond Dressers should always be held in a fixed tool post for use and passed over the face of the wheel very slowly, and in all cases, water should flow on the diamond, while it is cutting. Truing is always time well spent; accurate work demands a frequently trued wheel.

Illustrated here are typical hand tools and diamond points as supplied for Landis and Norton Grinders. We also mount diamonds in any special holders that may be required.

Prices of Stock Tools

(The size of the diamond determining the price)

Hand Tools

No. 74A	$ 5.00
No. 74B	6.00
No. 73A	10.00
No. 73B	15.00
No. 72A	20.00
No. 72B	25.00

Landis Nibs

No. 1	$ 5.00
No. 3	10.00
No. 5	15.00

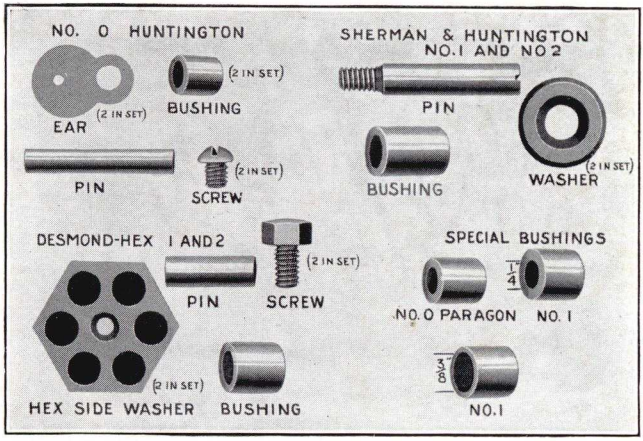
Landis Nibs—Continued

No. 7	$20.00
No. 9	25.00
No. 11	35.00

Norton Nibs

No. 2	$ 5.00
No. 4	10.00
No. 6	15.00
No. 8	20.00
No. 10	25.00
No. 12	35.00

Repair Parts



PRICE LIST

Desmond Huntington	Pins	Bushings	Ears	Screws (Each)	Washers (Pair)
No. 0	.02	.02	.01	.01	
No. 1	.07½	.07½			.07½
No. 2	.10	.10			.10

Desmond-Sherman No. 1 and No. 2 Parts same as Huntington.

Desmond-Hex	Pins	Bushings	Side Washers (Each)	Screws (Each)
No. 0	.02	.05	.12½	.02
No. 1	.03	.07½	.15	.02
No. 2	.05	.10	.20	.02½
No. 5-H	.03		.20	.02½

Desmond-Rearwin		
No. 1	.02	.02
No. 2	.03	.02

Bushings	No. 0 Paragon	No. 1—¼" hole	No. 1—⅜" hole
(Special)	.03	.03	.03

Things To Remember

A Grinding Wheel should always run true; lack of balance sets up vibration, causing bad work and later, fracture of the wheel.

Wheels should be kept sharp by frequent dressing to obtain the maximum output.

Don't use too hard a wheel for the work in hand and don't run the wheel too fast as this has much the same effect as having it too hard.

Don't hesitate to consult us on any Wheel-dressing problem.

We are more than manufacturers; we are also counsellors. In over twenty-five years' specializing we have learned, as an organization, things about wheel dressers that no single tool foreman, purchasing agent or individual mechanic could be expected to know. You may be puzzling over a question of wheel dressing or truing. Ask us about it. As we make every needed type of dresser,—from revolving cutter to the finest grade diamond,—we advise you impartially. Desmond-Stephan Mfg. Co.'s present reputation rests upon the practical value we have rendered in counsel, service and product. It will entail no obligation to write or wire us.

Any of our Dressers (except diamonds) can be tried in your plant without obligation to purchase.